

**Minutes**  
**Atlas Uranium Mill Tailings Relocation Committee Meeting**  
**Grand County Council Chambers, Moab, Utah**  
**Wednesday, July 17, 2002**  
**9:00 AM to 1:00 PM**

In attendance:

Bill Hedden - Grand Canyon Trust (Subcommittee Chair)  
Sarah Fields - self  
Bill Love - self  
Michael Adkison - self  
Kim Schappert - Grand County Council  
Harvey W. Merrell - Grand County  
Wayne Nielson - NPS  
Kleston Laws - UDOT  
Ron Hochstein - IUC  
Rod Warner – Washington Group  
Jay Vance - Envirocare  
Bob Baird – URS Corp.  
Audrey Berry - DOE GJO  
Tracy Plessinger, DOE-GJO  
John Elmer - MacTech-GJO  
Gary Kaeriker – MacTech-GJO  
Toby Wright – MFG Inc.  
Bob O'Brien - UDEQ/DERR

Update on activities since the last meeting (DOE-GJO)

Summary of NAS Report – Implications for Relocation Subcommittee and Project Scheduling (DOE-GJO):

DOE-GJO identified 20 recommendations from the NAS report (June 2002). DOE-GJO is developing schedule of activities and cost estimates to address these items. DOE-GJO will send a plan to address the NAS recommendations to DOE Headquarters by the end of July 2002. The plan will be sent to Jesse Roberson, Assistant Secretary, Office of Environmental Management. The plan will also include schedule impacts, such as the possible 6-month to 1-year delay to the Final Plan For Remediation.

DOE-GJO noted that pursuant to the Floyd D. Spence National Defense Authorization Act, DOE does not have to agree with the NAS recommendations. However, if they do not agree with the recommendations, DOE must submit a report to Congress explaining why they do not agree. DOE-GJO did not indicate that they disagreed with any of the recommendations at this time.

DOE-GJO added that they were already pursuing many of the recommendations in advance of the release of the NAS report. For example, they have started to look at the migration potential of the Colorado River but had not conducted any fieldwork to support that analysis. They will also be looking at long term failure scenarios for both the cap-in-place alternative as well as the Klondike site.

A question was asked as to the impact of the contaminated water in the pile to the ground water beneath the pile and how long it would take to de-water the pile with the cap-in-place alternative. DOE-GJO stated that it is likely that contaminated water in the pile is in contact with the ground water and that ongoing investigations such as drilling and coring of the pile will yield more complete information. The investigations will also help establish the hydraulic conductivity of the material in the pile, as well as the presence of potential slime-barrier layers within the pile.

DOE-GJO noted that the wick-drain system recently installed in the pile yields approximately 10,000 gallons per week released to an evaporation pond located atop the pile. DOE-GJO is looking at ways to increase the yield of the dewatering system.

#### General discussion -

As mentioned earlier in the meeting, DOE-GJO said that considering the NAS recommendations and gathering additional information will potentially delay the Final Plan for Remediation, and the subsequent decision on a final remedy, for 6 months to 1 year.

DOE-GJO also noted that internally they have been discussing their compliance with the Floyd D. Spence National Defense Authorization Act and how that may lead into beginning the NEPA process for the project. DOE-GJO said they might recommend to headquarters that once they have adequately responded to the NAS recommendations DOE move to begin the NEPA process for the project. Under this scenario, the Draft Preliminary Plan for Remediation would likely not be finalized; instead DOE would use existing information as a basis to begin an Environmental Impact Statement (EIS). If implemented, an EIS would comprehensively address all remediation alternatives and their impacts, including ground water remediation. DOE-GJO stressed that at this time they are only considering this as an option and they believe that by early September 2002 they will have made a decision and will be ready to make a recommendation to headquarters to start the NEPA process, or not.

Bill Hedden stated that sources from the Grand Canyon Trust had reported that the House version of the Energy and Water Appropriations Bill had recommended an additional \$1.966 million to DOE for use at the Atlas site.

Michael Adkison stated that he believes there are alternatives to the cap-in-place remedy that should be considered by DOE. These proprietary approaches include: stabilization of the bottom of the pile under a cap-in-place scenario and conveyor

alternatives to move the tailings to a railroad loadout adjacent to the site or to the Klondike Flats area. Mr. Adkison was referred to previous Relocation Subcommittee meeting minutes for discussions on conveyor belt alternatives considered. He was also referred to DOE-GJO's "biz-ops" program for handling independent proposals, and was invited to make a presentation to the Relocation Subcommittee at one of our future meetings.

Summary of DOE-GJO / DEQ Meetings with Utah Railway and ECDC (DOE-GJO and DEQ):

Representatives of DOE-GJO and UDEQ met with officials from Utah Railway Co. on June 11, 2002, to discuss the rail-haul alternative on the Southern Pacific Railroad Cane Creek Branch currently serving the Potash facility at the southern terminus of that branch. It was noted that Utah Railway Co. does not currently have haulage rights on the Cane Creek Branch, but that Utah Railway Co. would be interested in pursuing a lease agreement with Southern Pacific if the rail-haul alternative is implemented.

Items discussed during the meeting: Characteristics of the Cane Creek Branch – average (<1%) and maximum grades (1.5%), siding locations; load capacity of rail cars (100 tons/car); current rail traffic (1 train per week to Potash); number and types of railcars necessary for tailings haul; availability and cost of new and used locomotives and rail cars; purchasing vs. leasing; crew requirements, where they are stationed; requirements and configuration of siding(s) at Klondike site – construction cost per mile (average \$1 million /mile for new rail); unloading at Klondike – railcar roll-over, new vs. used; track use efficiencies (e.g., one 30-unit train, 3 roundtrips per shift); shift length (8hrs vs. 12hrs w/ overtime); days per week of operation; duration of project; and end-of-project equipment salvage/sales.

DOE-GJO requested pricing information from Utah Railway Co. (6/18/02 letter) using the following assumptions:

- 13 million tons of tailings to be transported
- Provide locomotives, cars and crew for transport of tailings (loading and unloading provided by others)
- Round trip of 30 miles using Cane Creek Branch
- Scenario 1: one 12-hr shift with two 30-unit trains
- Scenario 2: two 12-hr shifts with two 30-unit trains
- Freedom to optimize for most cost effective approach

As of 7/17/02 DOE-GJO had not received a response to the pricing information request. However, a response is expected in the near future.

DOE-GJO and UDEQ also visited the ECDC Solid Waste Disposal Facility located in East Carbon, Utah. The purpose of the visit was to see a waste disposal facility with operations similar to those anticipated for the Klondike site should that relocation

option be implemented for the Atlas Tailings project. Of special note was the railcar rollover used to remove waste from the railcars. A similar facility would likely be needed at the Klondike site. Also noted during the visit were cell excavation activities, backfilling, and capping activities.

Summary of DEQ Contact with Dr. Kip Solomon (DEQ):

Discussion of this item was deferred as Loren Morten, UDEQ, was unable to attend this meeting. Those interested were referred to the Ground Water Subcommittee's meeting minutes posted on the UDEQ website.

Additional action items from last meeting - revised cost estimates for alternatives (DOE-GJO):

Cap-in-place:

The cost estimate for this alternative is still in the same range, approximately \$100 million. This estimate does not include ground water cleanup costs.

DOE-GJO said that additional source areas for the cap material (limestone) had been located in the southern area of Spanish Valley. The cost of obtaining the rock from this area did not impact the cost of the cap-in-place alternative significantly. Kim Schappert, Grand County Council, did note that the County would have serious concerns about obtaining the cap material from this area because of the potential impacts from transporting the material along H191 through the center of town. DOE-GJO said an additional source of suitable material had been identified beyond the end of the Potash road. It was noted that this rock is in an undeveloped area and would likely pose similar safety problems if transported along the Potash road.

Rail-haul to Klondike Flats:

The latest estimate for this alternative is in the \$250-300 million range. The reduction in the cost estimate is due in part to the revised assumption that the area beneath the pile will not be backfilled to grade following removal of the tailings. Instead, the area will receive only 6" of backfill. Further, redundant costs have been eliminated, and work items indicating double handling of material have been omitted. Also oversight contractor costs have been fine-tuned (i.e. lowered).

DOE-GJO is still looking at assumptions for the construction overhead costs and considering the effects of using regional Davis/Bacon wage rates as opposed to national average rates and "means estimating" rates. Adjusting these assumptions may lower the rail-haul estimate further.

Road haul – Klondike Flats via H191 (costs for over-passes at Mill and near Klondike Flats):

The latest estimate for this alternative is in the \$220-270 million range, approximately \$30 million less than the rail-haul option. This includes a temporary single lane sheet-pile overpass at the mill site for a cost of \$1 million, and a similar overpass near Klondike Flats, also for \$1 million. The cost for temporary turn lanes in lieu of temporary overpasses would be approximately \$200 thousand at each end.

This estimate assumes 150 round trips per day, 40 tons per truck payload, five days a week, 52 weeks a year. Moving 12 million tons total would take 7.7 years to complete hauling the tailings. UDOT estimates this would be an additional 20% over current truck traffic. Increasing it to 300 roundtrips per day would cut the completion time to approximately 3.9 years, adding approximately 40% to current truck traffic.

Mine truck haul to Klondike Flats using railroad right-of-way:

A revised cost estimate for this option was not provided. It was concluded that the cost of improving or providing additional embankment to the current rail bed, the impact on service to the Potash facility for the duration of the project, and the post-project cost of replacing the railway and ballast between the mill site and Klondike flats would be prohibitive, if not technically infeasible.

For these considerations, it was concluded that this option is not feasible.

Slurry line to Klondike Flats or White Mesa:

Klondike Flats. DOE-GJO is still waiting on cost estimates from slurry pipeline materials and mining industry de-watering equipment suppliers. A conclusive cost estimate for this option could not be determined at this time.

White Mesa, IUC. IUC did not provide an estimate at this time.

Update on Groundwater Subcommittee activities:

DOE-GJO provided a brief update on Groundwater Subcommittee activities. Several reports and work plans have recently been release regarding investigations activities. These include:

- Groundwater and Tailings Pile Characterization Activities To Support the Plan for Remediation - Work Plan (June 2002)
- Migration Potential of the Colorado River Channel Adjacent to the Moab Project Site (June 2002)

- Preliminary Summary of Geology and Groundwater Resources in the Klondike Area, Grand County, Utah (June 2002)

DOE-GJO noted that these and other documents are available on-line at their website. Also, those interested in further information regarding the Groundwater Subcommittee's activities were referred to the most recent Ground Water Subcommittees meeting minutes posted on the UDEQ website.

#### Other Issues:

A question was asked about possible offsite migration or placement of contaminated materials at or near the sand hills adjacent to the Arches NP entrance. It was noted that this area is frequently visited by groups with many children and may be an exposure pathway for contamination from the Atlas site. DOE-GJO said there was no indication that tailings material was placed in this area but that it could be included with the remaining vicinity properties that still need to be screened and characterized.

A comment was made regarding the availability and use of a radiological survey done on the Moab Valley area in the 1980's by EG &G. DOE-GJO said they were not aware of the survey results but would look into the possibility. It was thought that the EG&G survey may help DOE-GJO in characterizing the extent of offsite contamination associated with the Atlas site.

#### Next Steps for the Subcommittee/Next meeting date:

It was determined that the Subcommittee would wait for DOE's decision whether to begin the NEPA process, or not, before the Subcommittee looked further at relocation options. It was suggested that rather than summarizing the Subcommittee's conclusions at this time in a formal recommendation to DOE, the group would reserve that for the opportunity to formally comment during the NEPA process anticipating that DOE would decide to proceed along those lines. Hence, the Subcommittee did not set a date for a next meeting, choosing instead to call for a meeting at a later date when new information on relocation options becomes available.